

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS

1. (Cancelled)

2. (Currently Amended) A PDT according to claim 3 ~~claim 1~~ wherein said second received image is stored in said first memory segment if said condition equals said second state.

3. (Currently Amended) ~~A PDT according to claim 1~~ portable digital terminal (PDT) for receiving, recording and playback of digital audio/visual (AN) data, said PDT comprising:

a memory having a plurality of memory segments, wherein a first memory segment stores a first received image;

a buffer for temporarily storing a second received image; and

a processor for storing said second received image in a second memory segment if a condition equals a first state, and not if said condition equals a second state,

wherein said condition is measured by a device taken from the group consisting of an image differencer, a clock mechanism, a voice activated device, a motion sensor device, and a light-sensitive device.

4. (Currently Amended) A PDT according to claim 3 wherein said image differencer ~~further~~ comprises:

a pixel difference determiner for determining a pixel difference between ~~a said~~ decoded frame and a received image frame in the video receiver;

a pixel threshold comparator for comparing said pixel difference to a pixel threshold, wherein said pixel threshold is non-zero; and

a selection setter to set a selection result wherein said selection result equals a first value if said pixel difference exceeds said pixel threshold and said selection result equals a second value if said pixel threshold exceeds said pixel difference.

5. (Currently Amended) A PDT according to claim 4 ~~claim 3~~ wherein said pixel threshold equals ten-percent root mean square of a plurality of pixels in an image frame.

6. (Currently Amended) A PDT according to claim 3 wherein said clock mechanism ~~further~~ comprises: a clock for determining a time-elapsd period;

a time threshold comparator for comparing said time-elapsd period with a specific interval, wherein said specific interval is non-zero; and

a selection setter to set a selection result wherein said selection result equals a ~~said~~ first value if said time-elapsd period exceeds said specified interval, and said selection result equals a ~~said~~ second value if said specified interval exceeds said time-elapsd period.

7. (Currently Amended) A PDT according to claim 3 wherein said voice activated device ~~further~~ comprises:

an audio detector for detecting an ambient sound received from an audio input port;

a sound threshold comparator for determining whether said ambient sound has attained a sound threshold, wherein said sound threshold is non-zero; and

a selection setter to set a selection result wherein said selection result equals a ~~said~~ first value if said ambient sound exceeds said sound threshold, and said selection result equals a ~~said~~ second value if said sound threshold exceeds said ambient sound.

8. (Currently Amended) A PDT according to claim 3 wherein said motion sensor ~~further~~ comprises:

a motion sensor for detecting whether a movement within an arc forward of said motion sensor; and

a selection setter to set a selection result, wherein said selection result equals a ~~said~~ first value if said motion sensor detects said movement, and said selection result equals a ~~said~~ second value otherwise.

9. (Currently Amended) A PDT according to claim 3 wherein said light-sensitive device further comprises:

a photon detector for detecting an ambient illumination received from a surrounding environment;

an albedo threshold comparator for determining whether said ambient illumination has attained an albedo threshold, wherein said albedo threshold is non-zero; and

a selection setter to set a selection result, wherein said selection result equals a said first value if said ambient illumination exceeds said albedo threshold, and said selection result equals a said second value if said albedo threshold exceeds said ambient illumination.

10. (Currently Amended) ~~A PDT according to claim 1 further including;~~ portable digital terminal (PDT) for receiving, recording and playback of digital audio/visual (AN) data, said PDT comprising:

a memory having a plurality of memory segments, wherein a first memory segment stores a first received image;

a buffer for temporarily storing a second received image;

a processor for storing said second received image in a second memory segment if a condition equals a first state, and not if said condition equals a second state;

a memory optimizer for calculating, based on a plurality of available memory segments, a maximum value for a first parameter from a set of three parameters after a second parameter and a third parameter from said set are specified by a user, said set selected from the group consisting of a pixel per frame resolution, a number of image frames, and an audio recording duration; and

a memory allocator for allocating said plurality of memory segments based on said maximum value for said first parameter, said second parameter and said third parameter.

11. (Currently Amended) ~~A PDT according to claim 1 further including;~~ portable digital terminal (PDT) for receiving, recording and playback of digital audio/visual (AN) data, said PDT comprising:

a memory having a plurality of memory segments, wherein a first memory segment stores a first received image;

a buffer for temporarily storing a second received image;

a processor for storing said second received image in a second memory segment if a condition equals a first state, and not if said condition equals a second state;

a network port for receiving a network data-stream at a known data-stream transfer rate, wherein said memory optimizer calculates a maximum audio recording duration;

a memory optimizer for calculating, based on a plurality of available memory segments, a maximum value for a first parameter from a set of three parameters after a second parameter and a third parameter being one of either a number of image frames or an audio recording duration; and

a memory allocator for allocating said plurality of memory segments based on said maximum value for said first parameter, said second parameter and said third parameter.

12-13. (Cancelled)

14. (Currently Amended) A PDT according to claim 3, ~~claim 4~~ further including:

an image encoder for producing an encoded frame from said first received image;

an image compressor for transforming said encoded frame from said encoder into a compressed encoded frame for storing in said sequenced memory segment; and

an image uncompressor for transforming said compressed encoded frame into an uncompressed encoded frame.

15. (Currently Amended) A PDT according to claim 3, ~~claim 4~~ further comprising:

a diagnostic identifier for determining whether a diagnostic condition has occurred, wherein said diagnostic condition corresponds to a status that the user should be informed;

a message selector for selecting a pre-programmed message corresponding to said diagnostic condition; and

a message writer for sending said message to an A/V output port.

16. (Currently Amended) A PDT according to claim 15 wherein said diagnostic condition is ~~may be~~ selected from the group consisting of an available memory segment, an error status, a timeout, and a misconnection warning.

17-18. (Cancelled)

19. (Currently Amended) A method according to claim 20 ~~claim 18~~ further including:

storing said second received image in said first memory segment if said condition equals said second state.

20. (Currently Amended) A method ~~according to claim 18 further including:~~ for receiving, recording and playback of digital audio/visual (A/V) data in a portable digital terminal (PDT), said method comprising:

storing a first received image in a first memory segment of a memory having a plurality of memory segments;

receiving a second received image;

measuring a condition, said condition being equal to one of either a first state or a second state;

storing said second received image in a second memory segment of said memory if said condition is equal to said first state;

calculating, by a memory optimizer for a plurality of memory segments, a maximum value for a first parameter from a set of three parameters after a second parameter and a third parameter from said set are specified by a user, said set selected from the group consisting of a pixel per frame resolution, a number of image frames, and an audio recording duration; and

allocating said plurality of memory segments.

21. (Currently Amended) A method ~~according to claim 18~~ for receiving, recording and playback of digital audio/visual (A/V) data in a portable digital terminal (PDT),
said method comprising:

storing a first received image in a first memory segment of a memory having a plurality of memory segments;

receiving a second received image;

measuring a condition, said condition being equal to one of either a first state or a second state; and

storing said second received image in a second memory segment of said memory if said condition is equal to said first state,

wherein said measuring a condition ~~further~~ comprises one of the following:

measuring by an image differencer a pixel difference between said first received image and said second received image, and comparing by said image differencer said pixel difference to a pixel threshold to obtain a selection result, wherein said condition is said first state if said pixel difference exceeds said pixel threshold and said condition is said second state if said pixel threshold exceeds said pixel difference;

measuring by a clock whether a time-elapsd period has attained a specified interval, wherein said condition equals said first state if said time-elapsd period exceeds said specified interval, and said condition equals said second state if said specified interval exceeds said time-elapsd period;

measuring by a voice activated device whether an ambient sound received from the audio input port, such as through a microphone, has attained a sound threshold, wherein said condition equals said first state if said ambient sound exceeds said sound

threshold, and said condition equals said second state if said sound threshold exceeds said ambient sound;

measuring whether an ambient illumination received from a surrounding environment has attained an albedo threshold, wherein said condition equals said first state if said ambient illumination exceeds said albedo threshold, and said condition equals said second state if said albedo threshold exceeds said ambient illumination; and

measuring by a motion sensor whether a movement within an arc forward of said motion sensor is detected, wherein said condition equals said first state if said motion sensor detects said movement, and said condition equals said second state otherwise.

22. (Currently Amended) A method according to claim 20, ~~claim 18~~ further including:

producing an encoded image from said first received image;

compressing said encoded image into a compressed encoded image;

recording said compressed encoded image in said memory; and

uncompressing said compressed encoded image into an uncompressed encoded image.

23. (Currently Amended) A method according to claim 21 ~~claim 18~~ further including:

receiving a network signal, wherein said network signal is taken from the group consisting of a network audio signal, a time marker, said pixel threshold, said specified interval, and said sound threshold.

24-27. (Cancelled)

28. (Currently Amended) A programmable storage device ~~according to claim 27~~ further including: readable by a machine tangibly embodying a program of instructions executable by the machine to perform method steps for receiving, recording and playback of digital audio/visual (AfV) data in a portable digital terminal (PDT), said method steps comprising:

storing a first received image in a first memory segment of a memory having a plurality of memory segments;

receiving a second received image;

measuring a condition, said condition being equal to one of either a first state or a second state;

storing said second received image in a second memory segment of said memory if said condition is equal to said first state;

calculating, by a memory optimizer for a plurality of memory segments, a maximum value for a first parameter from a set of three parameters after a second parameter and a third parameter from said set are specified by a user, said set selected

from the group consisting of a pixel per frame resolution, a number of image frames,
and an audio recording duration; and

allocating said plurality of memory segments.

29-30. (Cancelled)